Canon Paleo Curriculum
Unit: 3 Evolution
Lesson Plan 5

Caminalcules

Supplies: Drawings of Caminalcules (both living and fossil species), scissors, tape, 1 M X 1.5 M sheet of paper, meterstick, pencil, removable transparent tape.

Concepts: Using relative age of fossils to determine evolutionary history, using structural characteristics of fossils to determine evolutionary history, relating an organisms evolutionary history to current taxonomic placement.

Introduction: This simulation involves studying drawings of members of an imaginary phylum of animals called "Caminalcules." Students are asked to construct an evolutionary tree of these imaginary organisms based on their ages and their structural characteristics. Students should identify patterns in body plans, hypothesize the environment that these organisms lived in based on structure, and given the age of the fossils, determine their placement on an evolutionary tree.

Procedure
Part A :Taxonomy of Living Caminalcules

1. Examine the drawing of the living caminalcules in Figure 1. Start your classification by placing them in the animal kingdom. (What features indicate that the caminalcules belong in this kingdom?)

2. Your answer is based on some assumptions about the caminalcules and the functions of their structures. Further assume the following:
- The caminalcules are shown at life size.
- There is no information about their ventral surface.
- There is no information about their internal structures.
- There is no sexual differentiation in the caminalcules.
- Adult caminalcules do not vary in size.
- There is no information about their young, which may be quite different from the adults.
- There is no information about the functions of their structures.
- Each of the caminalcules is a separate species.

3. Cut out the individual caminalcules in Figure l. Look carefully at characteristics such as their appendages, shape, and color patterns. Based on your study, group similar species into genera and give each genus a name. Recall that members of a genus resemble each other more closely than they resemble members of other genera. Describe the characteristics of each genus.

4. Group the genera into one or more families. Name each family and describe its characteristics.

5. Assume the caminalcules all belong to the same order and class. Create and name a new order and class.

6. Create a new name for each species. Record each binomial name using the correct format.

7. Discuss your classification with those of other teams in the class. Try to come to a class consensus for a single classification.

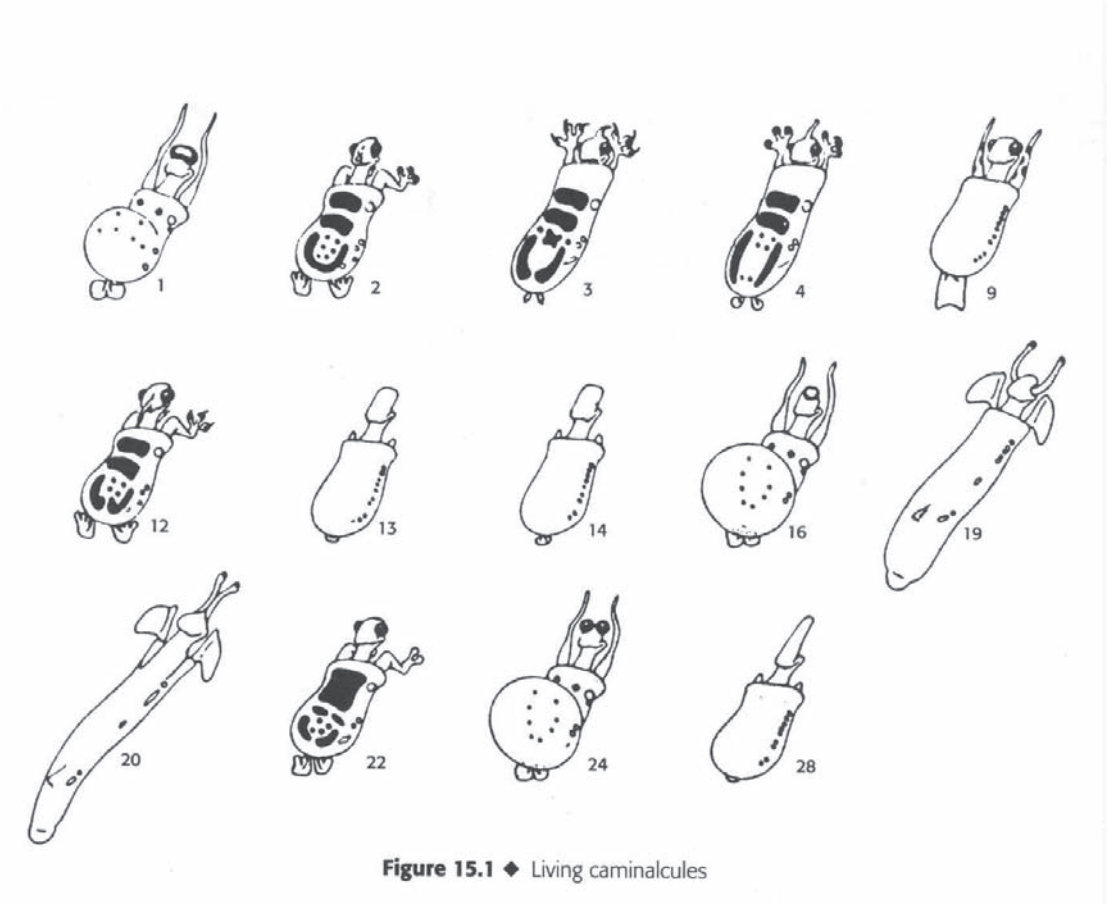

Figure 15.1 ◆ Living caminalcules

Living Caminalcules Fig. 1